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(54) Cladding Assembly

(57) A cladding assembly is made up from strips (12, 13) each of which has edge configurations (18, 20) which interfit with one another in such a way as to allow relative movement between two adjacent strips in the plane of the assembly so that the width of the assembly is adjustable. Adjacent strips are fitted together by interengaging a lip (24) behind a lip (33) with the strips relatively tilted and then rotating the strips to a co-planar position. A curve strip edge (43) may be provided on one edge of a strip.

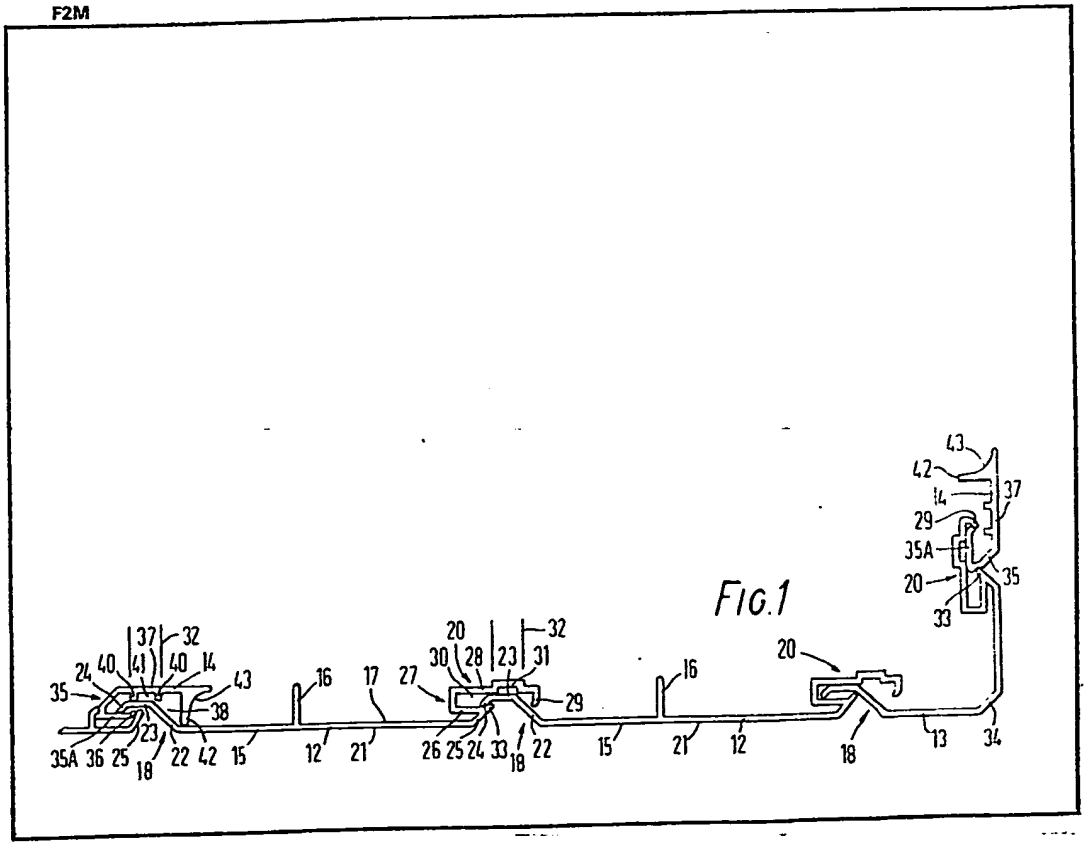

FIG.1

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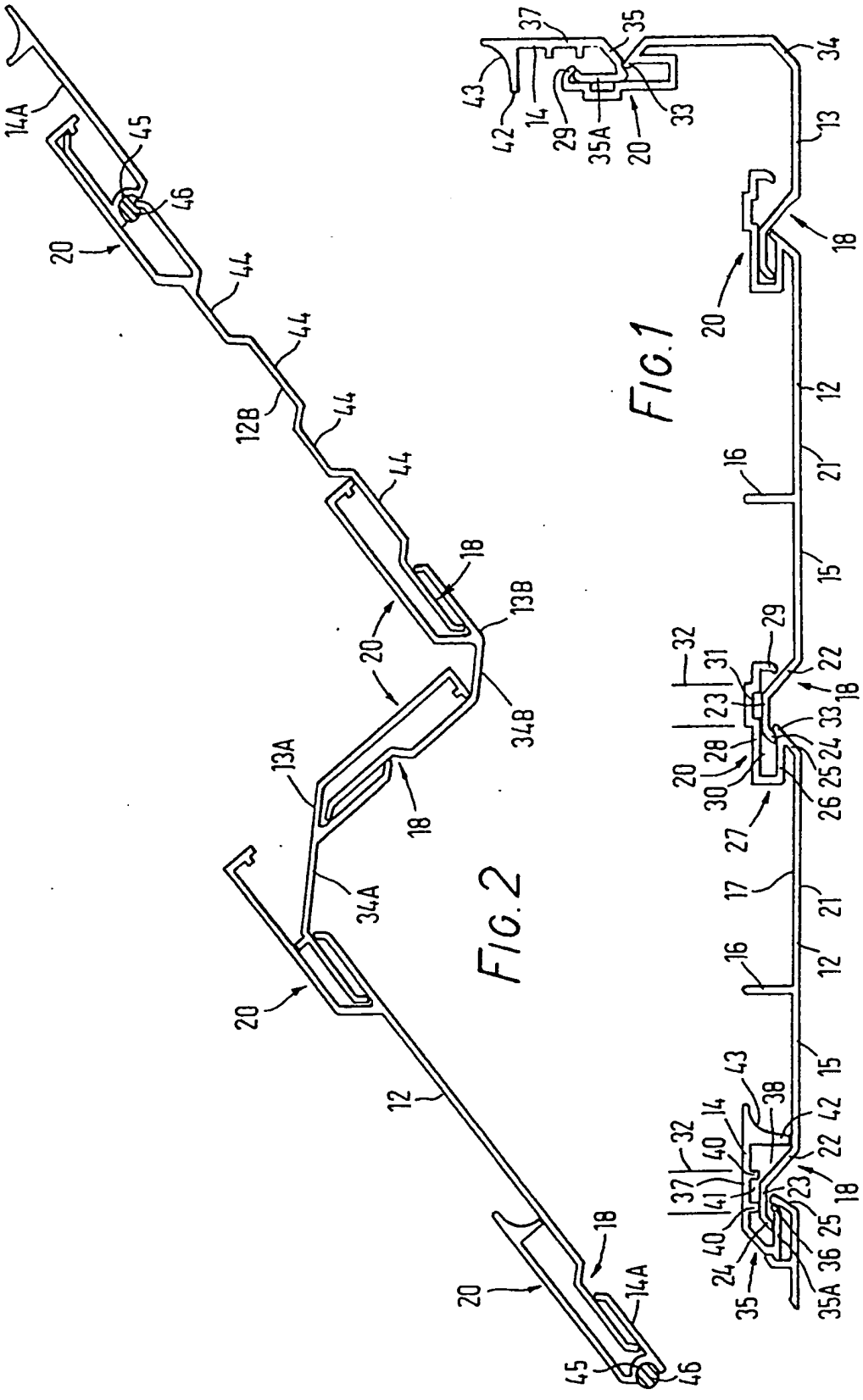

FIG. 2

FIG. 1

SPECIFICATION
Constructional Assembly

This invention relates to a constructional assembly for example a cladding. Conventionally, a cladding is assembled from extruded elongate elements which are fitted together along their edges. Each piece is normally six inches wide so that, where a fascia to which a cladding is to be applied has a width which is not an exact multiple of six inches, one piece must be cut. This is time consuming and produces an ugly or ill-fitting edge and, where the element has a surface finish, for example it is anodised, this finish gets damaged during the cutting.

The present invention provides a constructional assembly comprising a plurality of elongate elements each having an edge configuration extending along its edge and each edge configuration being arranged to interfit with the edge configuration of an adjacent element so that the elements can be combined to form a panel such as a cladding, the edge configurations being shaped to allow relative movement between two adjacent elements in the plane of the panel such that the width of the assembled panel is adjustable.

While it is normal to leave play for expansion and contraction between adjacent parts of a cladding the amount of adjustment available according to the present invention is of a different order and preferably the adjustment available between two adjacent elements is at least 10% of the width of each panel element. In a preferred embodiment a relative movement of 0.75 inch is available between two adjacent elements each of six inches width.

The edge configurations to be interfitted are shaped so that for assembly the edge configurations have to be partially engaged along their lengths with the adjacent elements relatively tilted and then be rotated relative to one another about the engaged edge parts to their assembled position. They can only be disassembled by relative rotational movement.

Two embodiments of constructional elements for forming a cladding, will be now described by way of example only, with reference to the accompanying drawings of which:

Figure 1 shows a section through a cladding formed from three different types of constructional elements and,

Figure 2 shows a section through a second cladding formed from slightly modified elements.

Referring first to Figure 1 the cladding shown is formed from three different types of elements comprising a basic panel or plank element 12 of which two are shown; a corner element 13, and a starter/finish element 14, of which one seen at each end. To clad a complete fascia there would normally be at least eight of the basic panel elements 12, each of which has a width of six inches.

Each of the panel elements 12 has a panel portion 15 with a strenghtening rib 16 extending normally from its rear surface 17 and has an edge configuration of one form 18 along one edge and an edge configuration of another form 20 along its other edge. The edge configuration 18 of one element is adapted to interfit with the edge configuration 20 of an adjacent element. In the assembled position the panel portions 15 of each element 12 lie in a plane with their front surfaces 21 presenting a pleasing appearance.

Each edge configuration 18 has a portion 22 extending rearwardly from the portion 15 at an angle of 45°C, then a short arm portion 23 extending parallel to the panel portion 15 and then a forwardly projecting lip 24. Each edge configuration 20 has a connecting portion 25 extending rearwardly from the panel portion 15 at an angle of 45° and this is integral with the one arm 26 of a C sectioned portion 27 the other arm 28 of which is extended beyond the one arm and has a forwardly extending lip 29. The C sectioned portion 27 defines a channel 30 whose depth (in the direction normal to the plane of the panel) is the same as the depth of the lip 24 and arm 23 together so that the parts 23, 24 of the edge configuration 18 are a sliding fit in the channel 30 and can slide in the channel in the direction parallel to the plane of the assembled panel. The width of the channel 30 (in the direction of the plane of the panel) is such as to allow approximately 0.75 inches of relative sliding movement between adjacent elements. The arm 28 is recessed at 31 to receive the head of a screw which will secure the panel element to a batten 32 or the like of the fascia. The part 25 extends into the channel 30 to form a lip 33 which engages with the lip 24 to limit the relative sliding and to prevent the edge configurations 18 and 20 from disengaging as a result of relative movement parallel to the plane of the panel.

In order to assemble the two elements together they must be tilted relative to one another and the lip 24 inserted around the lip 33. Thereafter the parts can be rotated relative to one another about these engaged lips until they are co-planar and interlocked against disassembly except by relative tilting movement.

The corner element 13 instead of having a single planar panel portion 15 has a panel portion 34 which extends round a right angle. However, it has one edge configuration 18 and one edge configuration 20 along its edges so that it can be interfitted with plank elements 12.

Each starter/finisher element 14 also defines a channel which can receive an edge configuration 18 and allow width adjustment of the panel as seen in the left hand side of the figure. Each starter/finisher element 14 has a C sectioned portion 35 one arm 35a of which has an inwardly curling lip 36 and other arm 37 of which is extended to define a channel 38 similar to the channel 30 of an edge configuration 20. Ribs 40 extend inwardly from the arm 37 to limit the effective depth of the channel 38 to be the same as that of channel 30 and to provide a recess 41

for a fixing screw. The channel 38 receives an edge configuration 18 in the same way as a channel 30 and allows the same adjustment. An arm 42 extends forwardly from the arm 37 to just contact the rear face 17 of a plank element in the assembled condition, and the corner surface between this arm and the end of arm 37 is radiused as shown at 43.

As seen at the right hand side of the figure the starter/finisher element 14 can also be interfitted with an edge configuration 20 by having the arm 35a inserted as a push fit between the lip 33 and the lip 29. When the cladding is horizontal and the arm 42 is at the bottom the radiused edge 43 acts as a return drip soffit.

It will be seen that when a cladding is assembled from at least nine of the elements 12, 13 and 14 side by side there are eight interfitting connections each of which can absorb 0.75 inches of relative movement so that the width of the assembled panel is variable by six inches and there is never any need to cut an element to obtain the correct panel width.

Figure 2 also shows part of a cladding assembled from a panel element 12, two modified corner elements 13a, 13b, a modified element 12a and two modified starter/finisher elements 14a, the elements corresponding in essential parts to the elements of Figure 1 and are referenced in the same way.

Panel element 12b has a panel portion 15b with strips alternately in different planes 44. The lip 29b is square.

Panel elements 13a, 13b, have their edge configurations 18, 20 connected by respective panel portions 34a, 34b at 45° to the edge configurations.

The outer side of each starter/finisher element 14a has a curved groove 45 in which is stuck a resilient strip 46 to aid fitting and retention of the element 14 to an edge configuration 20.

Claims

1. A constructional assembly comprising a plurality of elongate elements, each having an edge configuration extending along an edge thereof and each edge configuration being arranged to interfit with the edge configuration of an adjacent element so that the elements can be combined to form a panel such as a cladding, the edge configurations being shaped to allow relative movement between two adjacent elements in the plane of the panel such that the width of the assembled panel is adjustable.

2. An assembly according to Claim 1 in which the relative movement available between two adjacent elements is at least 10% of the width of the elements.

3. An assembly acording to Claim 2 in which the basic elements each have a width of substantially six inches and the relative movement available between adjacent elements is substantially 0.75 inches.

4. An assembly according to any of Claims 1 to 3 in which the edge configurations are shaped so that the edge configurations to be interfitted have to be partially engaged along their length with the adjacent elements relatively tilted and thereafter the elements can be rotated relative to one another about the engaged parts to their assembled co-planar positions.

5. An assembly according to any of Claims 1 to 4 in which the elements have first edge configurations and second edge configurations which are shaped to interfit with one another and allow the relative movement.

6. An assembly according to Claim 5 in which each element has a planar panel portion and each first edge configuration has two arms defining a channel extending parallel to the panel portion of its element but lying in a plane displaced rearwardly from the panel portion, and each second edge configuration has a finger extending parallel with its panel portion but displaced rearwardly relative to the panel portion and a lip on the finger, the finger and lip being slidable in the channel of a first edge configuration.

7. An assembly according to Claim 6 in which one arm has a lip partially closing the channel entrance so that said lips interengage when two elements are assembled to limit the movement apart of the elements.

8. An assembly according to Claim 6 or Claim 7 in which the one arm is recessed to accommodate a fixing means.

9. An assembly according to any of Claims 1 to 8 including a plurality of substantially planar panel elements and a plurality of corner panel elements, each of said corner and planar elements having a configuration of the first type along one edge and a configuration of a second type along the other edge.

10. An assembly according to Claim 9 including a plurality of end elements, each defining a channel shaped to receive an edge configuration of the second type on an adjacent element and to allow relative movement in the plane of that element, each end element additionally being arranged to interfit with an edge configuration of the first type.

11. An assembly according to Claim 10 in which each end element has an arm the outer edge of which is radiused such than when a cladding assembled from the elements is horizontal and said arm is at the bottom the radiused edge can act as a return drip soffit.

12. A constructional assembly comprising elements substantially as described herein with reference to or as illustrated in the accompanying drawing.

13. A panel in the form of a cladding assembled from elements according to any of the preceding claims.

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